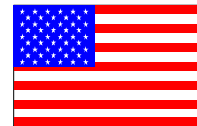




INTERNATIONAL LAKE SUPERIOR
BOARD OF CONTROL



Canada
Mr. Carr McLeod, Member
Mr. David Fay, Secretary

United States
BG Bruce A. Berwick, Member
Mr. John W. Kangas, Secretary

8 January 2007

MEMORANDUM TO INTERNATIONAL JOINT COMMISSION

Enclosed are the approved minutes of the Board's 3 October 2006 meeting held in Niagara Falls, Ontario. These will be posted to the Board's Web page following receipt of the French translation.

Enclosure

David Fay
Secretary, Canadian Section

DISTRIBUTION:
Board Members
Mr. J. Kangas
Regulation Representatives

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

Minutes of the 3 October 2006 meeting

The International Lake Superior Board of Control met on 3 October 2006 in the Ontario Room at the Old Stone Inn, Niagara Falls, Ontario. Mr. McLeod convened the meeting at 1:00 p.m. The attendees were:

United States

COL J. D. Drolet (Alt.)

Mr. J. Kangas

LTC W.J. Leady
Mr. S. Thieme (Alt.)

Dr. M. Colosimo
Mr. D. Sawruk
Ms. I. Brooks
Dr. T. Eberhardt
Mr. E. Tauriainen

Board Members

Secretaries

Regulation Representatives

Associates

Canada

Mr. C. McLeod

Mr. D. Fay

Mr. D. Fay
Mr. R. Caldwell (Alt.)

Mr. A. McPhee
Mr. T. McAuley
Mr. R. Stefano
Ms. K. Moir

Item 1. Approval of Agenda

The agenda was approved as proposed.

Item 2. Update on Hydrologic Conditions and Regulation

The Board was provided with the following update on hydrologic conditions for lakes Superior, Michigan-Huron, and Erie, and presented slides showing recent net basin water supplies, levels (observed and forecasted), and Lakes Superior/Michigan-Huron water balance parameters.

- Water supplies to the Lake Superior and Lakes Michigan-Huron basins in the past six months were generally below average. Lake Superior's August NBS set a new record low.
- Lakes Superior and Michigan-Huron levels are below average, and below levels of last year. Lake Superior was 11 to 35 cm (4 to 14 in.) below average during the past seven months. Lakes Michigan-Huron were 40 to 49 cm (16 to 19 in.) lower than average. Levels of Lake Superior have been consistently below average since April 1998, while levels of Michigan-Huron have been consistently below average since January 1999.
- Lake Superior outflows were below average since March, and the October outflow is the minimum outflow prescribed by Plan 1977-A, unless criterion 'c' over-rides. Outflows were as specified by Regulation Plan 1977-A. The gate setting at the Compensating Works was maintained at the equivalent of ½ gate open, even during flow measurement trials in early June.
- Mr. Fay presented the Board with a range of projected levels for the next 6 months, along with slides showing how 2006 levels compare to the previous two years. With average supplies, Lakes Superior and Michigan-Huron levels are expected to be 29 cm (11 in.) and 18 cm (7 in.) below chart datum, respectively, in March. Both lakes are expected to remain below chart datum this winter.
- The 1900-1986 "standardized departure" data as used in Plan 1977-A show that Lake Superior's level was extremely low relative to Lakes Michigan-Huron at the beginning of October. Lake Superior was about 2.8 units below its mean level, while Michigan-Huron was about 1.5 units below its mean level.

The Board agreed that outflows specified by the regulation plan be continued.

Item 3. Update on Long Lac and Ogoki Diversions

Ontario Power Generation (OPG) had provided the Board with an update on the discharges of the Long Lac and Ogoki Diversions. The Ogoki Diversion into Lake Nipigon (which flows into Lake Superior) averaged 151 m³/s (5,330 cfs) during March-August 2006. The Long Lac Diversion averaged 37.8 m³/s (1,330 cfs) for the same period. The total diversion was reported to be 112% of average for the reporting period. An additional spill northward from Long Lake during May equated to 38.7 m³/s (1,370 cfs). The diversion basins are also experiencing a prolonged dry spell in recent months.

Item 4. Flow Verification Measurements

Item 4a. Hydropower Plants

Edison Sault Electric Company (ESEC): It was noted that since there was good agreement between the measured flows and those reported by the hydropower plant during the June 2005 measurements, measurements were not required this year and the next ones necessary are scheduled for 2010.

U.S. Government Plant (USGP): The Corps of Engineers and Environment Canada conducted flow measurements from 6 to 15 June this year in an effort to identify the reasons for a discrepancy between measured and recorded outflows. On 10 June, Units 1, 2, 3, and 3A were shut down for four hours while Unit 10 remained in operation in order to check for leakage. Preliminary results suggest an over-reporting error of 6-9% of the flow, however this is subject to confirmation from complete analysis. A final report of the measurement results is expected later this winter. A recommendation will be developed prior to the spring meeting, to address the over-reporting.

Brookfield Power: On 6 to 8 June, measurements were made at the plant to verify agreement at lower discharges (below full plant capacity, which was found to be well calibrated during the June 2005 measurements). Preliminary data are being analysed, but it appears that measured flows agree well with reported flows throughout the range of discharges observed at the plant.

Item 4b. Compensating Works

Flow measurements were undertaken in 2005 with settings ranging from ½ to 7 gates open. Those measurements identified that further measurements were required to calibrate the opening used with 4 gates partially open that is equivalent to the ½ gate open setting. Investigations were undertaken this year from 6 to 12 June to attempt to refine this calibration. A new rating curve for the 4-gate-partially-open setting is expected by the next board meeting.

The Regulation Representatives will determine the likelihood of multiple gates being required with Lake Superior this low in order to assess the need for further measurements to be performed in 2007 at multiple gate settings. Currently, no further measurements are scheduled, unless needed to better define the ½ gate equivalent setting.

Item 5. Hydropower Plant Maintenance & Other Outages

ESEC: A one-hour flow reduction was required on 26 June to facilitate maintenance work in the power canal. Further reductions were necessary for about eight hours on 18 and 19 July to facilitate diving inspections at the head gates and forebay.

Currently, there was a three-week project under way for the replacement and repair of 90 feet of intake canal wall. This project is scheduled to be complete within 7 to 10 days. There are no major maintenance outages anticipated for the plant itself in the near future.

ESEC continues to consider options related to extension of the life of their hydropower plant and prolonged outages may be necessary in the future.

USGP: There have been several unit shutdowns over the past seven months. Unit 3A was out of service for 101 hours between 24 and 28 April and again for two hours on 2 May for testing. Between 2 and 5 May, Units 1, 2, 3, and 3A were off-line a total of almost 40 hours for relay testing and exciter checks. Unit 2 was off-line 20 and 21 May for almost 13 hours due to an electrical fault. Unit 1 was down intermittently from 20 May through 1 July for over 62 hours to diagnose and repair an electrical fault. Flow tests

on 10 June resulted in all but Unit 10 being shut down for about four hours. From 7 to 18 August, all units were off-line separately for a total of 167 hours for governor maintenance and testing. Unit 3A was out of service from September 17 to 23 for repairs to its sump pump. No further major shutdowns are currently scheduled.

Brookfield Power: During the reporting period, there were three five-day outages required for metering of transformers and inspections of the units. Unit C1 was shut down from 3 to 7 May, Unit C3 from 11 to 15 May, and Unit C2 from 19 to 24 May.

Units are scheduled to be shut down on October 28 to facilitate the annual underwater cable inspection for Lake Superior Power Ltd. Another shutdown is planned on October 29.

Major outages of units C1 and C3 are scheduled for April and May 2007. Each unit will be shut down for one month for static excitation and electronic governor control replacements.

The power entities were able to schedule their water use during the above mentioned shutdowns and reductions and the full monthly water allocations as specified by the Board were able to be released within each month. No problems related to water levels were reported as a result of the above flow variations.

Item 6. Compensating Works

Item 6a. Inspections

Routine inspections of the structure continued over the past seven months. The structure remains in generally good condition. A full five-year inspection and alignment survey of the structure, including underwater inspections, was undertaken in May 2005. The Board received copies of the inspection report from Brookfield Power for the Canadian side. An independent technical review of the U.S. report is being undertaken by the Corps, and it should be released by the end of October.

Item 6b. Maintenance: Recent & Planned

Brookfield Power reported that approximately 90% of the maintenance work scheduled for this year on the Canadian side of the structure has been completed, and that the remaining 10% will be done soon. Brookfield Power remains committed to undertake a major repainting and refurbishment program of their portion of the Compensating Works in 2007 through 2010. The work plan was filed with the Board in April 2006. It is expected that work on each gate will take approximately 30 to 45 days, with two gates at a time being worked upon each year, at a cost of about \$1 million/gate for a total of about \$8M over 4 years, beginning 2007.

Significant routine maintenance was being performed on the U.S. side of the structure this month, including clearing of embankments, paint touch-ups, replacement of gear boxes, and lubrication of cable wires. Monitoring of cracks near the gate seals was also scheduled, and a remotely operated vehicle (ROV) is expected to be deployed for two days later this month. U.S. work still to be performed includes removal of a concrete obstruction on the upstream side of Gate 11 and repair of side seals as necessary.

Item 7. Peaking and Ponding Update

Due to low levels in the lower St Marys River and low monthly outflows, ponding operations were restricted during the reporting period in April, May, and September. Restrictions were expected to continue through the end of the navigation season. The Regulation Representatives consider the current protocol to be working well. No shipping delays due to ponding operations have been reported. The Board's will begin including a semi-annual update on peaking and ponding in this fall's progress report to the Commission.

The power entities have stated that they remain disappointed with the Board's previous decision not to lower the threshold level for the suspension of ponding (from chart datum at U.S. Slip gauge by one foot (30 cm) to 176.09 m (577.71 ft.) on IGLD 1985). The lowering of the threshold had been previously deferred subject to an investigation to be conducted within the Upper Lakes Study into the concerns of

possible effects on aquatic habitat and species in the river expressed by the Michigan Department of Natural Resources . It was noted that ponding could have been permitted in the three months that it was restricted had the threshold been lowered, and it is quite likely that it could be permitted this fall based on expected conditions if the lower threshold level governed. It is understood that there is an economic impact on ESEC's customers in the Upper Peninsula of Michigan when ponding is restricted. ESEC has asked the Board to reconsider its decision, as it is their opinion that the concerns raised were anecdotal in nature and an ESEC-commissioned analysis by Dr. R. Marshall Werner, a Lake Superior State University scientist, lead them to believe that the impacts on the St. Marys River, in particular, would likely be negligible.

As a means of attempting to reach a resolution on this matter, it was suggested that it might be worthwhile for the Board to approach Dr. Mark Bain, a recognized expert from Cornell University to seek his opinion. Dr. Bain's paper was one the references cited in the original letter from MDNR. It had been questioned whether or not his findings in the paper cited, that were based on smaller rivers, would also apply on the St. Marys River. It was suggested that it may also be worthwhile holding a workshop with all interested parties. The Board agreed that it would seek a report reviewing existing work and an opinion on the impact of lowering the threshold from an appropriate expert. The Corps offered to contact Dr. Bain in the near future to discuss the idea. For the time being, the current threshold level was retained.

Item 8. Communications with the Public

Item 8a. 2006 Meeting with the Public Debrief

The Board briefly reviewed the multi-site public meeting and teleconference held on 24 May 2006 in Parry Sound, ON, Duluth, MN, and Sault Ste Marie, MI. The Board was pleased with the good overall attendance of about 70, 55 of which were in Parry Sound. It was agreed that most of the feedback was positive, especially regarding the multi-site format and location selection. It noted many of the concerns raised were regarding the continued low water levels, particularly on Lakes Michigan-Huron. There was also considerable frustration expressed by the public regarding the lack of perceived progress on the Upper Lakes Study. A comment at the Soo site reiterated the need for adequate notice when flow changes in the St. Marys Rapids were expected due to multiple gates being opened at the Compensating Works. There were also several other questions or comments raised.

The Board agreed that this format provides an excellent opportunity to learn of public concerns and help further educate the public.

Item 8b. 2007 Meeting with the Public Planning

Potential formats and site locations for upcoming meetings with the public were discussed. Although it was agreed that multi-site teleconferences appear to be effective and well-received, Board resources are stretched thinly with this format. It was suggested that the Sault Ste. Marie and Georgian Bay sites are the best attended, and efforts should be made to retain a third site elsewhere, such as the one proposed by a Wisconsin public interest group in Milwaukee.

The Board recognized that there may be confusion among many members of the public as to the mandates and responsibilities of the Board of Control versus the Study Board when the Upper Lakes Study is active. The public should be made aware of the independent and separate roles of the two boards.

It was agreed that the plans for next year's meeting with the public would be confirmed at the March 2007 business meeting. The U.S. Chair will lead the 2007 meetings. The U.S. Secretary remarked that the new meeting format employed by the International St. Lawrence River Board of Control is working well too. For those meetings, presentations are available for download from the Board's Web site beforehand so the public can download the slides, view them, prepare questions, and follow along more readily. He offered to cost out such an option should the International Lake Superior Board of Control wish to consider it further.

Item 8c. Notices of Flow Changes

In an effort to keep the public apprised of potential upcoming flow changes (especially those requiring multiple gates open settings at the Compensating Works), the Corps now has added a report to its website that includes the current Lake Superior outflow and Compensating Works gate setting. Furthermore, monthly media releases now contain information related to the estimated risk of requiring multiple gates settings at the Compensating Works in coming months. This “heads up” approach has been well received. The Regulation Representatives recently developed a tool to help assess the risk for requiring multiple gates in upcoming months based on current level conditions, forecasted levels, and the forecasted outflows prescribed by Plan 1977-A for use in these media releases.

Item 9. Review Semi-Annual Progress Report

The Board reviewed and made some changes to the draft Semi-Annual Progress Report.

The Canadian Secretary will incorporate the changes, update the data, and distribute advance copies to the IJC prior to its October meeting.

Item 10. Other Business

Item 10a. Status of Upper Lakes Study

It was noted that the Canadian government recently announced C\$500,000. of funding for the first year of the Study. The Commission expects that the Canadian Study Director will be selected and in place by in mid-November. Dr. Eugene Stakhiv and Dr. Tony Eberhardt have been retained as the U.S. Director and Manager, respectively, which were also their roles in the recently completed Lake Ontario-St. Lawrence River Study. Dr. Eberhardt added that partnering meetings had recently been held in Detroit with U.S. representatives following receipt of US\$525,000 of funding for Year 1 in May.

The Board proposed to meet with the Study Board as soon as possible. A good opportunity may be in Washington during the Commission appearances in April 2007.

Item 10b. Status of Great Lakes – St. Lawrence Seaway Study

The Corps reported that engineering investigations of the locks are complete, and an infrastructure analysis resulted in final criticality rankings of various components to focus more detailed reliability analyses on the most critical components. FY06 funding is being used to complete engineering/economic models and integration of results between the various models. Traffic forecasts for existing bulk commodities have been completed, and an ongoing U. S. Department of Transportation Maritime Administration study of potential new vessels/cargos will be used to supplement these forecasts for any new commodity movements. U.S. and Canadian environmental resources are being integrated, leading to a regional assessment of the current condition of key resources, identification of system-wide issues which continue to affect these conditions, and assessment of navigation related impacts associated with continuing operation and maintenance. A draft report will be generated this fall which will summarize the preliminary results and be presented to the study Steering Committee, leading to a final report next spring. Availability of U.S. funding for the study moving forward into FY07 may impact the timely completion of these efforts.

Item 10c. Status of Lock Replacement

The U.S. Assistant Secretary of the Army for Civil Works (ASA(CW)) has reviewed the Limited Re-evaluation Report (LRR) and Headquarters USACE awaits input from the Departments of Commerce and Transportation before returning it to the ASA(CW) for approval. It is anticipated that approval of the LRR will take place in FY07. Execution of the Project Cooperation Agreement with the non-Federal sponsor, the Great Lakes Commission would allow LRR approval in FY 07. The total cost of the project is estimated at \$342 Million, with a 10-year construction window anticipated. Preliminary design efforts on the channel deepening, guide wall and lock chamber continues with provided funding. The Board will continue to monitor the project progress and update the Commission as appropriate in future reports.

Item 10d. Board Membership Changes

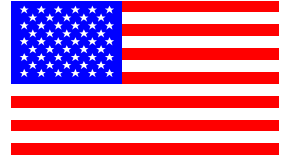
The Board welcomed COL Jack Drolet as the new U.S. Member, and LTC Leady as the new U.S. Regulation Representative. Mr. McLeod announced his plans to retire from Environment Canada in May

2007. Ms. Moir was invited to attend the meeting today, and she is expected to announce a replacement Canadian Board Member within the next few months.

Item 11. Next Meeting and IJC Appearance

The IJC Appearance has been scheduled for 09:00 a.m. on 19 October. The reception is scheduled for 6:30 p.m. the evening of 18 October. The spring meeting will take place in Detroit on the afternoon of 28 March.

There being no other business, the meeting adjourned at 4:05 p.m.



INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

BOARD MEETING

**3 October 2006
1300-1630 hours**

**Ontario Room
Old Stone Inn
5425 Robinson Street
Niagara Falls, Ontario**

Agenda

1. Approval of agenda
2. Update on hydrologic conditions and regulation
3. Update on Long Lac and Ogoki diversions
4. Flow Verification Measurements
 - a. Hydropower Plants
 - b. Compensating Works
5. Hydropower Plant Maintenance & Other Outages
6. Compensating Works
 - a. Inspections
 - b. Maintenance: Recent & Planned
7. Peaking and Ponding Update
8. Communications with the public
 - a. 2006 Meeting with the Public Debrief
 - b. 2007 Meeting with the Public Planning
 - c. Notices of flow changes
9. Review semi-annual progress report
10. Other business:
 - a. Status of Upper Lakes Study
 - b. Status of Great Lakes–St. Lawrence Seaway Study
 - c. Status of Lock Replacement
 - d. Board Membership Changes
11. Next meeting and IJC appearance